

Case: 25CI1:24-cv-00801-DHG Document #: 4 Filed: 11/12/2024 Page 1 of 2

**IN CIRCUIT COURT FOR THE FIRST JUDICIAL DISTRICT
OF HINDS COUNTY, MISSISSIPPI**

JAMES L. HENDERSON, M.D.

PLAINTIFF

V.

CIVIL ACTION NO. 24-801

**PATRICIA DUNLAP, M.D. AND
WALTER WILLIS, M.D.**

DEFENDANTS

SUMMONS

THE STATE OF MISSISSIPPI

**TO: Walter Willis, M.D.
7225 State Boulevard Ext.
Meridian, Mississippi 39305-9076**

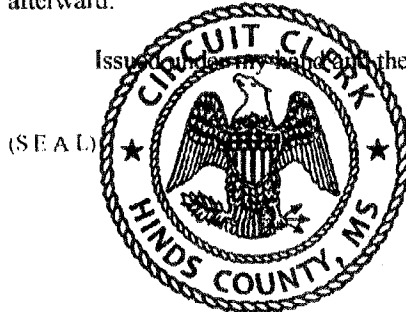
NOTICE TO DEFENDANT

**THE COMPLAINT WHICH IS ATTACHED TO THIS SUMMONS IS IMPORTANT AND YOU MUST
TAKE IMMEDIATE ACTION TO PROTECT YOUR RIGHTS.**

You are required to mail or hand deliver a copy of a written response to the Complaint to Dennis L. Horn, the attorney for the Plaintiff, whose post office address is Post Office Box 2754, Madison, MS 39130 and whose street address is 1300 Highway 51, Madison, MS 39110. Your response must be mailed or delivered within (30) days from the date of delivery of this summons and complaint or a judgment by default will be entered against you for the money or other things demanded in the complaint.

You must also file the original of your response with the Clerk of this Court within a reasonable time afterward.

Issued under my hand and the seal of said Court, this 12 day of November, 2024.



ZACK WALLACE, CLERK OF THE CIRCUIT COURT
FOR THE FIRST JUDICIAL DISTRICT OF HINDS
COUNTY, MISSISSIPPI
P. O. BOX 327
Jackson, Mississippi 39205

By *Zack Wallace*
Deputy Clerk

Dennis L. Horn (MSB #2645)
Horn & Payne, PLLC
P. O. Box 2754
Madison, MS 39130-2754
Phone: 601-853-6090
FAX: 601-853-2878
hornpayne@gmail.com
Attorney for Plaintiff

**DEFENDANT'S
EXHIBIT**

A

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JURY TRIAL DEMANDED

**IN CIRCUIT COURT FOR THE FIRST JUDICIAL DISTRICT
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CIVIL ACTION NO. 24-801

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WALTER WILLIS, M.D.**

DEFENDANTS

COMPLAINT

COMES NOW James L. Henderson, M.D. and files this his Complaint for libel and defamation, and as grounds therefor would allege the following:

1.

Plaintiff, James L. Henderson, M.D., is an adult resident citizen of the First Judicial District of Hinds County, Mississippi, whose address is 1505 Springridge Drive, Jackson, Mississippi 39211.

2.

Defendant, Patricia Dunlap, M.D., the former supervisor of Plaintiff Henderson who served as the Emergency Department Director of the Choctaw Health Center, and who is an adult resident citizen of Neshoba County, Mississippi, may be served with process of this Court at 10051 Peacock Cove, Philadelphia, Mississippi 39250-6614.

3.

Defendant, Walter Willis, M.D., who served as the Chief Medical Officer of the Choctaw Health Center, and who is an adult resident citizen of Lauderdale County, Mississippi, may be

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served with process of this Court at 7225 State Boulevard Ext., Meridian, Mississippi 39305-9076.

4.

Plaintiff worked as a physician with Defendants, also physicians, at the Choctaw Health Center from March 29, 2021 until Plaintiff Henderson's termination date on or around January 11, 2024. Plaintiff's termination was proximately caused by malicious defamatory statements made by Defendant Patricia Dunlap, M.D., Plaintiff's former supervisor, and Defendant Walter Willis, M.D., the Chief Medical Officer of the Choctaw Health Center. Defendant Willis, M.D. filed a malicious defamatory and libelous Complaint Report outside of the scope of their employment, seeking Plaintiff's discipline with the Mississippi State Board of Medical Licensure located in the First Judicial District of Hinds County, Mississippi, at 1867 Crane Ridge Drive, Suite 200-B, Jackson, MS 39216, attacking Plaintiff Henderson. It follows that the substantial events that caused Plaintiff's injury occurred in the First Judicial District of Hinds County, Mississippi, rendering venue proper in this Court. Sec. 11-11-3 of the Miss. Code Ann. of 1972 (2004).

5.

Defendant Willis' Complaint Report with the Mississippi State Board of Medical Licensure, submitted December 1, 2023 is annexed hereto and incorporated herein as Exhibit "A." It states, *inter alia*:

Dr. Willis reported that Licensee (Plaintiff James L. Henderson) was disruptive and had been previously sent to a physician's health program and counseling. Dr. Willis stated that Licensee's peers became concerned after Licensee administered IM Rocephin

to two babies, 9 days old and 19 days old. The MEC performed a review and elected to terminate Licensee. Dr. Willis stated that they were fearful for Licensee's patients.

6.

The above malicious comments concerning the Plaintiff are false. Both Defendants well knew that Dr. Henderson followed the exact standard of care for treating said infants and well knew there had been no counseling through a physician's health program or otherwise for Plaintiff Dr. Henderson.

7.

Statements in Exhibit "A" are libelous *per se* and published viciously, with malice and with reckless disregard for the truth. The Defendant, when he published these words, either (1) knew the statements were false, or (2) published the statements in reckless disregard of whether those statements were true or not.

8.

Plaintiff Henderson has practiced medicine with no complaints against him for 30-plus years before being confronted by Defendants herein.

9.

It was in June of 2023 when problems first emerged. Dr. Dunlap, the head of the ER for the Choctaw Health Center, told Plaintiff, Dr. Henderson, that Dr. Willis told her "Henderson just doesn't like women."

10.

Dr. Henderson could not understand where this comment would come from, but presumed that, because he conversed frequently with male physician Dr. Nester Olivo in Spanish and they

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were very friendly, Dr. Willis was making a derogatory (incorrect) comment about Plaintiff Henderson's sexual preference.

11.

Soon after Dr. Dunlap told Dr. Henderson about Willis' comment, she began taking actions to get rid of Dr. Henderson, actions that show malicious intent and that were outside of the scope of her employment.

12.

Defendant Dunlap's next action was to illegally record on her personal device the "Sign Out" conversation she had with Dr. Henderson when she came on the day shift and took over the patients that Dr. Henderson had handled during his night shift. Dr. Henderson caught Dr. Dunlap in the act of re-playing her recording of their conversation when he walked back into the room to get something and heard his voice coming from her phone. Dr. Dunlap's response when she realized he heard her recording was "You aren't going to report me, are you?" The recording was prohibited. Henderson never had a chance to report her because within days he was out on medical leave for a serious injury that could have been avoided (see Paragraph 14 herein).

13.

In July of 2023, Dr. Dunlap made an "Employee Counseling Form (VERBAL)" Complaint against Dr. Henderson that he had used the antibiotic Bicillin against protocol because there was a national shortage of the drug. Said Employee Counseling Form is annexed hereto and incorporated herein as Exhibit "B." Defendant's complaint displays the underlying animus against Dr. Henderson as no restriction of use for Bicillin had been announced or put up in any public viewing place for the doctors and hospital administration. In her filed complaint against the

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Plaintiff, Dr. Dunlap states that Dr. Henderson should have known of this restriction because nurses standing nearby Dr. Henderson had “discussed the limited use of Bicillin in front of him.” Dr. Henderson wrote a letter with documentation attached supporting his decision for the use of Bicillin as well as pointing out other underlying, unwritten issues that were the true motivating factor for the ridiculous complaint against him by Dr. Dunlap, including the comment regarding his sexuality by his superior. Dr. Henderson’s letter dated July 31, 2023, to Dr. Dunlap, is annexed hereto and incorporated herein as Exhibit “C.”

14.

Meanwhile, in the summer of 2023 Dr. Dunlap had been denying Dr. Henderson time off to go to a needed medical exam in Atlanta. Because she refused his request for time off, Dr. Henderson ended up having to have his big toe amputated in October of 2023 in Jackson. The amputation could have been avoided had he been granted his requested vacation time from Dr. Dunlap. It was during his medical leave for the amputation and following recovery that Dr. Henderson received his suspension letter from Dr. Dunlap and almost immediate complaint to the Mississippi State Board of Medical Licensure by Dr. Willis, which stated, incorrectly and completely beyond his scope of authority, that Dr. Henderson had been terminated from his position on December 1, 2023.

15.

In his letter, responding to the complaint of Dr. Dunlap in July of 2023 (Exhibit “C” hereto), Dr. Henderson pointed out in writing his defenses to the truth of what was going on with Dunlap and Willis, and because of that, the Defendants sped up the process to have Dr. Henderson terminated from his employment before he could return from medical leave.

16.

A suspension letter to Plaintiff Henderson from Defendant Patricia Dunlap, M.D., dated November 28, 2023 (see Exhibit “D” annexed hereto and incorporated herein by reference) was additionally sent to Defendant Willis and other members of the Choctaw Health Center, including its HR Director, the Compliance Administrator, the Interim Health Director, and the General Counsel of the Center. The suspension letter is libelous *per se* and published viciously, with malice and with reckless disregard for the truth. Defendant Dunlap knew that the statements were false.

17.

The suspension letter to Plaintiff Henderson written by Plaintiff Dunlap (Exhibit “D” hereto) states, *inter alia*:

... I was made aware of disruptive behavior you have inflicted upon the nursing staff. Condescending and bullying behavior is not tolerated in the workplace, nor is ignoring information and disrespecting the knowledge and experience of your colleagues. I am disappointed to learn that this behavior has been ongoing.

... I was informed that you have been observed ordering Rocephin regularly, especially for children, and that you order tests at the same time as you order Rocephin, without waiting for test results. I audited our provider records and found that there is merit to the concerns brought to my attention. I am especially concerned that you ordered Rocephin for a 9-day-old infant, which the records showed the parents refused. I am further concerned that you ordered Rocephin for a 19-day-old infant which was administered to the infant. In an infant of this age (less than 30-days-old) if Rocephin is deemed necessary then a septic workup should be performed. These actions fall well below the standard of care required of a physician.

... While these matters are under investigation, you are summarily suspended ...

18.

The derogatory comments concerning the Plaintiff in Exhibit “D” are false.

19.

Said statements in Exhibit “D” are libelous *per se* and published viciously, with malice and with reckless disregard for the truth. Defendant Dunlap, when she published these words, knew the statements were false.

20.

On June 14, 2023 Defendant Dunlap issued a warning to Plaintiff Henderson with similar complaints as stated in the suspension letter: “Nurses on duty report that they discussed the limited use of Bicillin in front of Dr. Henderson, but he ordered it to be given anyway.” See Exhibit “B” hereto, the Employee Counseling Form (Verbal) issued by Defendant Dunlap.

21.

Plaintiff Henderson responded to the Employee Counseling Form (Exhibit “B” hereto) with a letter and two supporting articles to Defendant Dunlap. Plaintiff Henderson’s response (Exhibit “C” hereto) defends his decisions and actions.

22.

On December 1, 2023, Defendant Willis wrote a letter to Plaintiff Henderson informing him that a Medical Executive Committee met concerning his suspension. This letter is annexed hereto and incorporated herein as Exhibit “E.” The letter from Defendant Willis also informed Plaintiff Henderson that the Committee “recommended [Plaintiff Henderson’s] expulsion from the Choctaw Health Center Staff effective immediately on November 30th, 2023.”

23.

A Report, made by Jennifer Cook with the Choctaw Health Center under the direction of Defendants Dunlap and Willis, was maliciously filed with the National Practitioner Data Bank requesting the revocation of Plaintiff Henderson's clinical privileges on November 30, 2023. The Report (annexed hereto and incorporated herein as Exhibit "F") is libelous *per se* and is published viciously, with malice and reckless disregard for the truth.

24.

The malicious attacks on Plaintiff Henderson culminated in his Termination, as delivered on January 11, 2024. The Termination Letter, from the Office of the Tribal Chief Cyrus Ben, is annexed hereto and incorporated herein as Exhibit "G." It states:

I am writing to advise you that you are being terminated January 12, 2024, from employment in your position as Staff Physician – ER with the Medical Program, Choctaw Health Department due to Unsatisfactory Work Performance, Failure to Work to Communicate or Work Effectively with others, Negative Attitude, and medical treatment not meeting the standard of care.

On November 30, 2023, Choctaw Health Center's Medical Executive Committee voted unanimously to uphold the summary suspension authorized under CHC's Medical Staff Bylaws. The decision to suspend your privileges was reviewed by the governing board and they upheld the revocation of your privileges. The recommendations for termination is based on internal findings that you were disruptive in the workplace, and your performance was unsatisfactory for treatment which fell below the standard of care.

Pursuant to the Revised Administrative Personnel Policy and Procedures, Section XVI (C)(3)(a) and Section XVII (D), your employment is terminated.

Your health care coverage that the Tribe provides will remain in effect until February 1, 2024. At that time, you can choose to continue health care coverage at your cost by contacting Tracey Shoemake at Risk Management at (601)663-7503. Your last paycheck will be provided to you after February 08, 2024 since you

are paid bi-weekly.

Should you have any questions regarding this matter, please contact Dianne Willis, Director in the Human Resources department at (601)650-1548.

The Defendants' behavior and statements concerning the Plaintiff are malicious, intentional, willful, wanton, grossly careless, indifferent, and/or reckless, justifying an award of punitive damages.

25.

Plaintiff incorporates the allegations of Paragraphs 1-24 herein by reference. The verbal statements by the Defendants constitute slander *per se*, and the writings constitute libel *per se*. Said malicious false statements and actions render these Defendants libel for the damages caused by the said defamation, and, additionally, back pay.

26.

As a direct and proximate result of the Defendants' report of false statements about the Plaintiff, the Plaintiff has incurred pain, suffering, and severe mental anguish and emotional distress, been subjected to lost employment, wages and fringe benefits, legal expenses, and damage to his reputation.

27.

The Defendants' conduct as to the Plaintiff evokes outrage or revulsion, the results being foreseeable, such that damages may be assessed for mental anguish and emotional distress for the Plaintiff, along with punitive damages.

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28.

Defendants violated numerous by-laws required to be followed before the Defendants could in any way legitimately have fired Henderson. Therefore, their actions were outside of the scope of their employment and showed their malicious intent to contest his proposed termination based on Defendants' false statements.

29.

Defendants also refused to allow Henderson to exhaust his tribal remedies. They refused to allow Henderson to pursue his right to appeal his suspension and termination up to the Tribal counsel.

30.

As a further direct and proximate result of Defendants' report of false statements about the Plaintiff, Plaintiff has encountered significant expenses in pursuing legal action.

WHEREFORE, PREMISES CONSIDERED, Plaintiff prays for the following relief of and from the Defendants, jointly and severally:

1. A judgment for past and future medical expenses reasonably incurred by Plaintiff.
2. Reasonable costs and reasonable attorneys' fees, along with prejudgment and post-judgment interest.
3. Lost pay and benefits suffered by Plaintiff because of termination from his employment.
4. An award of compensatory damages of Seven Hundred Fifty Thousand Dollars (\$750,000.00) for personal injury, pain and suffering, mental anguish, emotional distress, and damage to reputation.

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5. Punitive damages in the amount of One Million Dollars (\$1,000,000.00) of and from Defendants Walter Willis, M.D. and Patricia Dunlap, M.D.

Respectfully submitted, the 12th day of November, 2024.



Dennis L. Horn, Attorney for Plaintiff,
James L. Henderson, M.D.

Dennis L. Horn (MSB #2645)
Shirley Payne (MSB # 4071)
Leigh Horn (MSB #105481)
HORN & PAYNE, PLLC
P. O. Box 2754
Madison, MS 39130-2754
Phone: (601) 853-6090
Fax: (601) 853-2878
hornpayne@gmail.com
leighkpaynehorn@gmail.com



MISSISSIPPI STATE BOARD
OF MEDICAL LICENSURE

COMPLAINT REPORT

- Your Information ✓
- Subject ✓
- Incident Information ✓
- Patient Information ✓
- Witness Information ✓
- Uploads ✓
- Verification ✓
- Confirmation ❷

Complaint Report

Confirmation

You have successfully submitted your complaint. We will review your complaint and take appropriate action as necessary. If you provided contact information, it is possible that we may contact you or any other involved parties you entered for additional details.

Click the button below to print your complaint.

Print

Confirmation Information

Submission Date:

12/1/2023 4:05:35 PM

Confirmation Number:

WYB1T-W3E3

Your Information

Name:

Walter White

Address:

Choctaw Health Center 210 Hospital Circle
Philadelphia, MS 39350

Primary Phone:

601-987-3079

Secondary Phone:

Email Address:

Relationship to Patient:

Other

Relationship Other:

OMO

Practitioner/Subject Information

Name:

James Leslie Henderson

EXHIBIT "A"

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Licensee:

MD Permanent #15783

Primary Practice:

9844 Ridgewood Road
Jackson, MS 38211

Specialty:

Surgery, Plastic & Reconstruct

Incident Information

Incident Type(s):

Competency, Impairment - Disruptive Behavior, Unprofessional Conduct - Action by Another Jurisdiction, Unprofessional Conduct - Substandard Care

Date of Occurrence:

12/01/2023

Facility/Practice Name:

Choctaw Health Center

Address:

210 Hospital Circle
Philadelphia, MS 39350

Narrative:

On December 1, 2023, Board staff received a phone call from Dr. Willis. He identified himself as the Chief Medical Officer of Choctaw Health Center. Dr. Willis reported that Dr. James L. Henderson was terminated from the Health Center on November 30, 2023. Dr. Willis reported that Licensee was disruptive and had been previously sent to a physician's health program and counseling. Dr. Willis stated that Licensee's peers became concerned after Licensee administered TM Roxaplin to two babies, 9 days old and 19 days old. The MEC performed a review and elected to terminate Licensee. Dr. Willis stated that they were fearful for Licensee's patients. Licensee has filed an appeal.

Patients

No records have been added!

Witnesses

No records have been added!

End Complaint

COPY

Choctaw Health Center Employee Counseling Form (VERBAL)

Employee Name: James Henderson, MDDepartment: EmergencyPosition Title: Physician

Note: Failure to show immediate and sustained improvement in the areas discussed will result in further discipline, up to and including termination.

List specific problems requiring action as discussed with the employee. Describe policy or rule violation, list date, time, place, and employees involved and any witnesses to the incident. Attach supporting documents, if any.

Failure to use bicillin as indicated. Due to nation wide shortage of Bicillin, the antibiotic is to be used in the treatment of syphilis only. Dr. Henderson used Bicillin to treat pharyngitis and a toe laceration. While Bicillin may help with pharyngitis, if it is due to strep, it gives no coverage for toe laceration. Nurses on duty report that they discussed the limited use of Bicillin in front of Dr. Henderson, but he ordered it to be given anyway.

Employee's comments after the above discussion of the problem(s):

See attached response/discussion (2 pgs) and attached articles (2), indicating the proper role of PCP in prevention of wound infection - Streptococcus + Clostridium.

Record of Previous Action (if applicable):

Type	Date	Issued By
Verbal Warning	6/14/2023	Patricia Dunlap, M.D.

Describe the disciplinary action plan to be taken:

- Include what the employee is to do to correct the problem
- Include the period of time during which the employee is evaluated
- Explain the action recommended is a verbal warning for the employee's file; failure to show immediate and sustained improvement in the areas discussed will result in a recommendation for further discipline, up to and including termination.

Respect the training and medical knowledge of coworkers.
Appropriate use of antibiotics.

I understand that my signature does not necessarily mean that I agree with the contents contained in the Counseling Form: it is an acknowledgement of receipt.

EMPLOYEE SIGNATURE: *James Henderson*DATE: July 31st / 2023

SUPERVISOR'S SIGNATURE: _____

DATE: _____

DEPARTMENT DIRECTOR'S SIGNATURE: _____

DATE: _____

HEALTH DIRECTOR'S SIGNATURE: _____

DATE: _____

EXHIBIT "B"

**James Henderson, M.D.
1505 Springridge Drive
Jackson, Mississippi 39211**

Patricia Dunlap, M.D.
Emergency Department Director
Choctaw Health Center

July 31st, 2023

Dear Dr. Dunlap,

I feel I must speak up to protect my professional & personal reputation and integrity, while addressing the current complaint.

In March 2022, I was falsely accused by EMS of diverting a case of pedestrian struck with a loss of consciousness to ARMC-ED. The paramedic, having been known to you for 7 years, was taken at his word. However, I subsequently presented irrefutable evidence and successfully cleared my name. I am unaware if any action was taken against the paramedic for lying and possibly falsifying a medical record.

Subsequently, I was falsely accused of maliciously sending CHC-EMS (Daniel) to UAB-Birmingham with a patient with a saddle embolism, just to make them drive a long distance. Once again, I was deemed "guilty" until proven otherwise. My extremely thorough documentation in the patient's medical record of the long list of facilities, with times that I contacted them, was initially made to protect CHC from accusations regarding delay in transport and if the patient died during the long transport. As it would turn out, the documentation protected me from CHC-EMS's false allegation. Again, I am unaware if any action was taken for fabricating another erroneous complaint.

Then earlier this year, you relayed to me, that someone stated, "I don't think Dr. Henderson likes women." I cannot explain how inaccurate this statement is and how distressing it has been. You stated that you had not received any complaints to support such an accusation. Furthermore, you immediately extrapolated that you didn't understand how Cynthia Eaks would have recommended me so highly if I had such a character flaw. Cynthia recommended me as the person I have always been, and will continue to be. It should be noted that most of my friends at CHC are women. I have known some co-workers, such as Laura and Luther in the lab, on a friendly basis for 20+ years. In today's society and workplace environments, such a claim is highly inflammatory. I am respectful towards everyone, men and women inclusively, as can be noted professionally and personally. I am an Eagle Scout and as such it is neither in my personality, nor my upbringing, to disrespect anyone.

EXHIBIT "C"

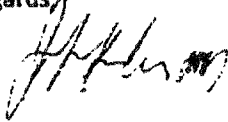
Now I am falsely accused of misusing Bicillin for a very dirty web space laceration of a foot of a stickball player. The wound was grossly contaminated with grass and debris from walking barefoot. With my extensive surgical, wound care and hyperbaric training, I recognized the increased risk for Clostridium perfringens & Streptococcal skin infections were present, which can become life threatening infections. Penicillin is the treatment, and Bicillin is the correct choice with the addition of Bactrim to treat this type of wound. (Article Attached)

To muddy the waters even further, it is documented that I should have overheard a conversation that may or may not have taken place between two (2) RN's. I cannot be responsible for information discussed in a conversation in which I was not directly involved or participating in. It should be noted, also, this was one of the busiest nights in the ED, July 12th, as it was the first night of the Choctaw Indian Fair.

If CHC has restricted the use of Bicillin only to the treatment of Syphilis, there are no notifications on the ER bulletin boards notifying staff and outlining this hospital policy.

I thoroughly believe all of these prior issues along with the current complaint needed to be addressed. I hold my position at CHC in high regard and want to maintain my professional reputation accurately and in good standing.

Regards,

A handwritten signature in black ink, appearing to read 'J. Henderson', with a stylized flourish at the end.

James L. Henderson, M.D.



Gas Gangrene

(Clostridial Myonecrosis)

By Larry M. Bush, MD, FACP, Charles E. Schmidt College of Medicine, Florida Atlantic University

Reviewed/Revised Jun 2023

Gas gangrene is a life-threatening infection of muscle tissue caused mainly by the anaerobic bacteria *Clostridium perfringens* and several other species of clostridia.

- Gas gangrene can develop after certain types of surgery or injuries.
- Blisters with gas bubbles form near the infected area, accompanied by fever, rapid heartbeat and breathing, and often pain at the infection site.
- Symptoms suggest the diagnosis, and imaging tests or culture of a sample taken from infected tissue is usually done.
- Treatment involves high doses of antibiotics and surgical removal of dead or infected tissue.

Gas gangrene is a fast-spreading clostridial infection of muscle tissue that, if untreated, quickly leads to death.

Several thousand cases of gangrene occur in the United States every year.

Clostridia thrive when no oxygen is present. That is, they are anaerobes. So they reproduce well in soft tissues that have been severely damaged and in wounds that are very deep. Such tissues have poor blood flow and thus low oxygen levels.

Most clostridial soft-tissue infections, including gas gangrene, are caused by *Clostridium perfringens*. Clostridial soft-tissue infections usually develop hours or days after an injury but sometimes take several days to appear.

Other clostridial soft-tissue infections include

- Infections of the inner layer of skin and surrounding soft tissues (cellulitis), which may not be very painful
- Deeper infections into fibrous tissue around the muscles called fascia (fasciitis) or muscle

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die.

Diagnosis of Gas Gangrene

- Examination and culture of fluids from the wound
- Sometimes exploratory surgery or biopsy to obtain a tissue sample

Gas gangrene is suspected based on symptoms and results of a physical examination.

X-rays are taken to check for gas bubbles in muscle tissue, or computed tomography (CT) or magnetic resonance imaging (MRI) is done to check for areas of dead muscle tissue. These findings support the diagnosis. However, gas bubbles may also occur in other anaerobic infections.

Fluids from the wound are examined under a microscope to check for clostridia and are sent to a laboratory where bacteria, if present, can be grown (cultured) and tested. Cultures can confirm the presence of clostridia. However, not all people with clostridia have gas gangrene.

Confirmation of the diagnosis often requires exploratory surgery or removal of a tissue sample for examination under a microscope (biopsy) to check for characteristic changes in muscle.

Treatment of Gas Gangrene

- Antibiotics
- Surgery to remove all dead and infected tissue

If gas gangrene is suspected, treatment must begin immediately.

High doses of antibiotics, typically penicillin and clindamycin, are given. All dead and infected tissue is removed surgically. In severe cases, amputation may rarely be necessary.

Treatment in a high-pressure oxygen (hyperbaric oxygen) chamber may also be helpful, but such chambers are not always readily available.

Prevention of Gas Gangrene

Skin injuries should be cleaned thoroughly. People should contact their doctor if the injured area enlarges and becomes swollen, hot, red, and tender because they may need antibiotics. People with diabetes and other disorders that weaken their immune system have an increased risk of developing injury-related infections and should be evaluated as early as possible.

Doctors do the following to prevent serious infections and gas gangrene in people who have wounds or who are undergoing surgery:

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- Clean wounds thoroughly
- Remove foreign objects and dead tissue from wounds
- Give antibiotics intravenously before, during, and after abdominal surgery to prevent infection

No vaccine can prevent clostridial infection.

Drugs Mentioned In This Article

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ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, Feb. 1987, p. 312-316
0066-4804/87/020312-05\$02.00/0
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Vol. 31, No. 2

Comparison of Single and Combination Antimicrobial Agents for Prevention of Experimental Gas Gangrene Caused by *Clostridium perfringens*

DENNIS L. STEVENS,^{1,2*} BETH M. LAINE,¹ AND JOANNE E. MITTEN¹

Infectious Disease Research Unit, Veterans Administration Medical Center, Boise, Idaho 83702,¹ and Department of Medicine, University of Washington School of Medicine, Seattle, Washington 98195²

Received 4 August 1986/Accepted 20 November 1986

The treatment of experimental gas gangrene caused by *Clostridium perfringens* was investigated by using combinations of antimicrobial agents. This study demonstrated that rifampin, penicillin, metronidazole, and clindamycin were all bactericidal against standard inocula (10^6 to 10^8 CFU). These antimicrobial agents were then administered to mice beginning 30 min after intramuscular injection of 10^6 CFU of *C. perfringens* type A. The highest doses used produced levels of drug in blood which exceeded the MIC by at least a factor of 40. In addition, other groups of mice received monotherapy at full dose or one-fourth full dose or combination antimicrobial therapy at full or one-fourth full dose. Among the single and combination antimicrobial treatments, metronidazole alone, clindamycin alone, and clindamycin plus penicillin were the most efficacious ($P < 0.05$). Although the survival of mice treated with clindamycin plus penicillin was greater than that of mice treated with clindamycin alone, the difference did not reach statistical significance ($P > 0.05$). In contrast, mice treated with a combination of metronidazole and penicillin demonstrated greater mortality than those treated with metronidazole alone ($P < 0.05$). In summary, combination antimicrobial therapy of experimental *C. perfringens* infection did not improve survival compared to that achieved with metronidazole or clindamycin alone, and some combinations significantly reduced survival ($P < 0.05$).

Gas gangrene caused by *Clostridium perfringens* is a fulminant infection which rapidly progresses to profound shock and then death without treatment (1, 2, 10, 25). Current therapy involves aggressive surgical debridement, administration of hyperbaric oxygen, and penicillin treatment (8, 10, 12, 14, 21, 22). Because more than one species of clostridia may be cultured from the wound and since strains other than *C. perfringens* are more likely to be resistant to clindamycin, cefoxitin, chloramphenicol, and tetracycline (9, 10, 16, 26), antibiotic resistance is an important consideration (10) in selecting an antimicrobial agent. In addition, Marrie et al. (16) and Dubreuil et al. (9) found antibiotic resistance to penicillin, tetracycline, cephalothin, clindamycin, and metronidazole among clinical isolates of *C. perfringens*.

For these reasons and because we recently showed that clindamycin, metronidazole, rifampin, and tetracycline are superior to penicillin in the treatment of experimental gas gangrene in mice caused by *C. perfringens* (25a), we investigated the efficacy of combination antimicrobial therapy in this model. Three different combination therapies were investigated: clindamycin plus penicillin, metronidazole plus penicillin, and rifampin plus penicillin. Each drug alone had demonstrated efficacy, and each combination included both a protein synthesis-inhibiting drug and a cell wall synthesis-inhibiting drug.

MATERIALS AND METHODS

Organism. *C. perfringens* ATCC 13124 was purchased in lyophilized form from the American Type Culture Collection, Rockville, Md. Organisms were maintained anaerobically in chopped meat-glucose broth and recultured every 2 weeks. The purity of *C. perfringens* was verified before each

experiment by inoculating blood and egg agar plates and incubating them aerobically and anaerobically by using an anaerobic GasPak system (BBL Microbiology Systems, Cockeysville, Md.).

Inoculum preparation. The inoculum was prepared in basal proteose peptone medium (Difco Laboratories, Detroit, Mich.) supplemented with amino acids, salts, and vitamins to provide optimal bacterial growth and toxin production (13, 18-20). The medium contained 2% proteose peptone, 0.5% yeast extract, 0.5% glucose, 0.05% NaCl, and trace amounts of $MgSO_4$, $FeSO_4$, L-cysteine, nicotinic acid, thiamine, riboflavin, pyridoxamine, and zinc (13, 18-20). A portion (40 ml) of a 12-h culture of *C. perfringens* was inoculated into 4 liters of growth medium and incubated at 37°C. The pH was maintained at 7 to 7.5, and nitrogen was bubbled through the culture fluid to provide proper anaerobic conditions. (The dynamics of growth and toxin production were identical to those for bacteria grown in BBL GasPak systems.) After 4 h of incubation, 600 ml of the culture fluid was removed, centrifuged at $10,000 \times g$ for 15 min at 4°C, and suspended in 15 ml of sterile saline. Serial dilutions of washed bacteria prepared in cold saline were assayed for A_{630} and CFU. A standard plot of CFU against the A_{630} of washed *C. perfringens* cells was prepared so that numbers of viable bacteria could be estimated from the A_{630} . In all instances CFU in the inoculum were verified by duplicate platings of appropriate dilutions.

Antimicrobial agents. The antibiotics used in this study were as follows: clindamycin phosphate for animal studies and clindamycin hydrochloride for MIC studies (The Upjohn Co., Kalamazoo, Mich.); metronidazole for intraperitoneal injection for animal studies (American McGaw Division of American Hospital Supply Corp., Irvine, Calif.) and metronidazole powder for MIC studies (Searles Pharmaceuticals, Inc., Chicago, Ill.); sodium penicillin G (Sigma Chemical

* Corresponding author.

Co., St. Louis, Mo.); and rifampin (Merrell Dow, Cincinnati, Ohio). The antibiotics were dissolved in deionized water, except rifampin and metronidazole, which are poorly soluble in water at neutral pH. Rifampin was prepared in an aqueous solution of 50% (vol/vol) methanol (analytical grade; American Burdick and Jackson). Metronidazole was used as an intravenous preparation containing metronidazole (5 mg/ml), NaCl (7.4 mg/ml), dibasic sodium phosphate $\cdot 7H_2O$ (1.12 mg/ml), and anhydrous citric acid (0.40 mg/ml) at pH 5. This solution was diluted appropriately with water for less concentrated doses. Metronidazole (75 mg/kg) was administered in a volume of 0.3 ml per dose; all other antibiotic doses were administered in a volume of 0.1 ml. Mice treated with two drugs received each antibiotic in a volume of 0.05 ml so that the total volume injected at each treatment time was 0.1 ml. Control mice received 0.1 ml of sterile deionized distilled water by intraperitoneal injection on the same time schedule as that for treated mice. All antibiotic solutions were sterilized by passage through a membrane filter (pore size, 0.22 μ m; Millex-GS; Millipore Corp., Bedford, Mass.) before injection.

Antimicrobial susceptibility testing. Serial dilutions of filter-sterilized antimicrobial stock solutions were prepared in the growth medium described above. Each assay tube held 2.9 ml of growth medium containing a serial twofold dilution of the drug suspended in growth medium (12.5 to 0.011 μ g/ml) and 0.1 ml of a log-phase culture of *C. perfringens* containing 5×10^3 to 4×10^8 CFU. Susceptibility tests were done in duplicate for each drug concentration, and the tubes were incubated at 37°C for 18 h under anaerobic conditions by using a BBL GasPak system. The MIC was defined as the lowest antibiotic concentration that showed no turbidity after 18 h of incubation (4). Inoculated and uninoculated tubes containing only growth medium were used as controls. The MBC was defined as the lowest antibiotic concentration that killed 99.9% of the initial inoculum (4). The MBCs were determined by spreading 0.1-ml samples from each clear tube onto blood agar plates and then incubating the plates anaerobically at 37°C for 18 h. The lowest antibiotic concentration which yielded less than 10 colonies was considered the MBC.

Experimental animals. Swiss Webster mice of either sex weighing 15 to 20 g were obtained from the Rocky Mountain Research Laboratory, Hamilton, Mont., or Tyler Laboratories, Bellevue, Wash.

Experimental gas gangrene in mice. A reproducible and lethal gas gangrene infection was produced in mice by intramuscular injection of 10^8 CFU of washed *C. perfringens* in a volume of 0.1 ml into the right hindquarter through a 26-gauge needle (25a). Infected mice developed swollen hemorrhagic thighs with crepitus, extensive tissue necrosis, and 100% mortality within 24 h. A progressive reduction in mean survival time was apparent with graded inocula between 10^6 and 10^{10} CFU. In contrast, injection of 10^5 to 10^8 CFU did not cause illness or mortality.

Antibiotic treatment. Each treatment group and the control group consisted of 10 mice, all of which were inoculated with the same dose and preparation of washed, viable *C. perfringens* cells. Mice received single or combination antibiotic injections intraperitoneally at 0.5, 4, 8, and 12 h postinoculation. Four dosing patterns were evaluated. Group A received antibiotic doses which had proven optimal therapeutic efficacy and which produced levels of antibiotic in serum within the therapeutic range (25a). These doses of drug will be referred to as the optimal dose of antimicrobial agent. Group B received antibiotic doses equal to one-fourth the

doses used in group A. Group C received a combination of antibiotics, each at a dose identical to that used in group A. Finally, group D received a combination of two antibiotics at doses equal to one-fourth the doses used in group A. Groups A and C received the following doses: clindamycin, 8.6 mg/kg; metronidazole, 75 mg/kg; rifampin 20 mg/kg; and sodium penicillin G, 390 mg/kg. Groups B and D received the following doses: clindamycin, 2.1 mg/kg; metronidazole, 19 mg/kg; rifampin, 5.0 mg/kg; and sodium penicillin G, 98 mg/kg. The animals were observed over a 72 h period, and the time of death and general condition were recorded.

Antibiotic levels in serum samples. Antibiotics were prepared and administered as described above. Mice (weight, 15 to 20 g) received two doses of antibiotic 3.5 h apart before being bled at 10, 30, or 60 min after their last antibiotic dose. The ventral tail vein of each mouse was nicked, and 0.6 to 1.0 ml of blood was collected. The blood was allowed to clot at room temperature for 30 to 60 min before centrifugation at $4,000 \times g$ for 10 min. Serum samples from five or six mice were combined for each time, frozen at -70°C , and shipped on dry ice for assay. Normal mouse serum was supplied for dilutions and standards. All antibiotic levels were determined in duplicate by agar well diffusion bioassays performed at the Clinical Microbiology Laboratory, University Hospital, Seattle, Wash.

Statistical analysis. Data were expressed as the mean \pm standard error of the mean. Comparisons of mean survival time among groups of mice with the same long-term survival were made using one-way analysis of variance and then Duncan's new multiple range test. Comparisons of the number of mice surviving at various times after inoculation (e.g., survival tables or discrete data) were made using Fisher's exact test. The level of significance was chosen at $P < 0.05$.

RESULTS

MICs and MBCs. The MIC and MBC were equal for each antibiotic tested and were as follows (micrograms per milliliter): clindamycin, 0.07; metronidazole, 0.69; rifampin, 0.03; and penicillin, 0.27. Since the MBCs were determined with 0.100-ml samples from MKC tubes, our values may be lower than those that would have been determined if 0.010-ml samples were used, because of an antibiotic carryover effect (23). These results are similar to values reported by others (9, 16, 24, 25a, 26, 27). Mean MICs (micrograms per milliliter) for larger inocula were as follows. With 1.2×10^7 CFU the following MICs were determined: penicillin, 0.58; clindamycin, 0.29; and rifampin, 0.140. With 1.2×10^8 CFU the MICs were as follows: penicillin, 1.5; clindamycin, 0.19; and rifampin, >12.5 .

Antibiotic concentrations in serum samples. Antibiotic levels of clindamycin, metronidazole, penicillin, and rifampin in mouse sera under the experimental conditions are shown in Table 1. All antibiotics achieved levels in serum greater than 10 times their MIC for *C. perfringens*, except clindamycin whose level was only 4 times the MIC, 10 min after injection at one-fourth the optimal dose. Nonetheless, these levels for clindamycin in serum are in close agreement with published values for mice (15). All antibiotics except clindamycin also achieved levels in serum for sustained periods within the range of accepted human therapeutic values. Clindamycin at 8.6 mg/kg produced peak levels in serum of $2.7 \pm 3 \mu\text{g/ml}$ [University of Washington Clinical Microbiology Laboratory]. We also demonstrated (data not shown) that

TABLE 1. Levels of antimicrobial agents in sera of treated mice^a

Antimicrobial agent and dose (mg/kg) every 4 h	Antibiotic level (μ g/ml) in sera ^b at (min):		
	10	30	60
Clindamycin PO ₄			
2.1	0.3 \pm 0.3	ND ^c	ND
8.6	2.7 \pm 0.3	0.59 \pm 0	ND
Metronidazole			
19	9.1 \pm 1.1	9.1 \pm 0.2	7.0 \pm 0.3
75	59 \pm 3	39 \pm 3	22 \pm 0
Rifampin			
5.0	5.0 \pm 0.5	4.4 \pm 0.3	6.2 \pm 0.4
20	9.3 \pm 0.8	12 \pm 0.4	9.8 \pm 0
Sodium penicillin G			
98	77 \pm 3	73 \pm 0	12 \pm 1
390	230 \pm 34	260 \pm 38	50 \pm 0.4

^a Animals received drug doses in 0.1-ml volumes injected intraperitoneally at 0 and 3.5 h. Blood samples were taken after the last injection.

^b Values are the means \pm standard errors of the means of duplicate assays of pooled serum samples from 5 or 6 mice.

^c ND, No antibiotic detected.

higher doses of clindamycin (43 and 86 mg/kg) produced peak levels in serum of 12.1 and 19.6 μ g/ml, respectively, although neither dose resulted in greater survival (data not shown) than that achieved with the dose reported here (8.6 mg/kg) ($P > 0.05$).

Monotherapy of experimental gas gangrene. Significant improvement in survival at 6 h was observed with all antibiotics tested except penicillin at one-fourth the optimal dose ($P < 0.05$ compared with untreated controls [Table 2]). By 12 h treatment only with clindamycin at 2.1 or 8.6 mg/kg or metronidazole at 75 mg/kg led to survival which was significantly greater than that of control mice ($P < 0.05$). At times greater than 24 h, clindamycin (8.6 mg/kg) and metronidazole (75 mg/kg) were the most efficacious treatments (P

< 0.05), and the difference between survival with clindamycin and metronidazole was not significant ($P > 0.05$).

Combination therapy of experimental gas gangrene. Mice treated with a combination of penicillin and rifampin each at one-fourth the optimal dose (group D) had a longer mean survival time (17.1 h) than did mice treated with optimal doses of either rifampin (11 h) or penicillin (9.0 h) alone ($P < 0.05$). Despite this difference, the survival of mice receiving either dose of rifampin plus penicillin was significantly better than that of mice receiving higher-dose monotherapy only at 8 and 10 h ($P < 0.05$) (Table 2). In addition, no significant differences were apparent between high-dose and low-dose combinations of penicillin plus rifampin ($P > 0.05$) in terms of percent survival or mean survival time.

The combination of clindamycin and penicillin each at one-fourth the optimal dose resulted in a mean survival time of 11.8 h, not significantly different from that achieved with clindamycin at one-fourth the optimal dose (group B; 13.7 h) or penicillin at one-fourth the optimal dose (group B; 7.6 h). Mortalities in mice receiving clindamycin and penicillin combination therapy each at the optimal dose were lower than those with the low-dose combination ($P < 0.05$) but not lower than the mortalities observed with clindamycin alone ($P > 0.05$).

In contrast, the survival of mice receiving combination therapy with metronidazole plus penicillin at optimal doses was less than that with metronidazole alone at the optimal dose (Table 2 and Fig. 1). The difference was apparent at all times from 8 to 72 h and was statistically significant at 10 to 24 h ($P < 0.05$).

DISCUSSION

C. perfringens type A has been the most common causative agent of human cases of gas gangrene in civilian as well as wartime settings (1, 2, 7, 10, 14, 22). Studies with experimental animals indicate that penicillin is the drug of choice for the prophylaxis of gas gangrene caused by this bacterium (1-3, 8, 11, 21, 27). Recently, 11 cases of gas gangrene occurring during beta-lactam (cephalosporin) pro-

TABLE 2. Effects of combination antimicrobial therapy and monotherapy on survival of mice with experimental *C. perfringens* gas gangrene

Group ^a	Treatment (dose [mg/kg]) ^b	% Survival at (h):						
		4	6	8	10	12	24	72
Control	H ₂ O	100	40	20	0	0	0	0
A	Clindamycin phosphate (8.6)	100	100	100	70	60	40	30
	Metronidazole (75)	100	100	100	90	90	60	40
	Rifampin (20)	100	100	40	40	30	10	0
	Sodium penicillin G (390)	100	90	40	40	20	0	0
B	Clindamycin phosphate (2.1)	100	100	100	70	40	10	0
	Metronidazole (19)	100	80	80	40	30	10	0
	Rifampin (5.0)	100	90	50	20	0	0	0
	Sodium penicillin G (98)	100	70	30	20	10	0	0
C	Clindamycin phosphate (8.6) plus sodium penicillin G (390)	100	100	100	70	60	30	40
	Metronidazole (75) plus sodium penicillin G (390)	100	100	90	50	40	30	20
	Rifampin (20) plus sodium penicillin G (390)	100	90	60	40	40	10	0
D	Clindamycin phosphate (2.1) plus sodium penicillin G (98)	100	100	80	40	40	10	0
	Metronidazole (19) plus sodium penicillin G (98)	100	100	100	70	60	0	0
	Rifampin (5.0) plus sodium penicillin G (98)	100	100	70	60	40	10	0

^a All mice received 1.3×10^8 CFU of washed *C. perfringens* intramuscularly.

^b Animals received antibiotic(s) at the dose(s) indicated in a total volume of 0.1 ml injected intraperitoneally 30 min postinoculation and thereafter every 4 h for a maximum of four doses.

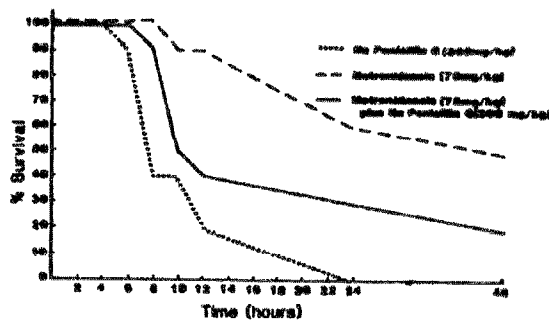


FIG. 1. In vivo antagonism between metronidazole and penicillin in treatment of experimental gas gangrene caused by *C. perfringens*. The efficacy of metronidazole and penicillin in combination was compared with that of each drug alone using optimal doses of each drug.

phylaxis have been described (5, 17). In addition, antimicrobial resistance of *Clostridium* species to penicillin and other antibiotics has been detected (9, 16, 23). The treatment of established gas gangrene is more complex, and optimal antibiotic treatment, supportive measures, and aggressive surgical debridement are essential (1, 7, 8, 10).

Problems germane to optimal antimicrobial treatment involve tissue penetration, postantibiotic effect, inoculum effect, dynamics of bacterial killing, and perhaps toxin suppression. Traub (27) recently demonstrated the antimicrobial tolerance of some strains of *C. perfringens* to cefamandole, imipenem, cefuroxime, and vancomycin. We did not observe tolerance in this study, but we did observe inoculum effects in vitro with rifampin and penicillin against *C. perfringens* ATCC 13124. In contrast, no such effect was detected with clindamycin even with inocula of $>10^9$ CFU. This observation likely has clinical relevance, because Bullen (6) demonstrated that *C. perfringens* reaches concentrations of $>10^8$ CFU/g of muscle in experimental gas gangrene. Similarly, Traub (27) demonstrated a lack of efficacy for penicillin and cephalosporins in experimental gas gangrene when high inocula ($>10^8$ CFU) of some virulent strains of *C. perfringens* were used to initiate infection. We previously demonstrated that penicillin is the least efficacious drug and clindamycin and metronidazole are the most efficacious in treating fulminant gas gangrene (10^9 CFU) in a murine model (25a). Thus, the ineffectiveness of penicillin may have been related to the large number of bacteria at the site in vivo and to the inoculum effect observed in vitro. Penicillinase activity was not detected in cultures of this organism. Thus, the cause of the observed inoculum effect is unexplained.

Results of this study substantiate our previous finding that metronidazole and clindamycin used singly are more efficacious than penicillin (Table 2) and also demonstrate that combinations of antibiotics were not more efficacious than single agents. An unexpected observation was that mice treated with a combination of metronidazole and penicillin had poorer survival than animals treated with metronidazole alone at the optimal dose (Table 2 and Fig. 1). In contrast, the combination of clindamycin and penicillin demonstrated neither additive nor antagonistic effects in vivo (Fig. 1 and Table 2). The efficacy of these agents in preventing infections caused by other strains of *C. perfringens* or other gangrene-producing clostridial strains is unknown. Since such strains are more likely to be resistant to antibiotics (9,

10, 16), there is rationale for selecting a combination of antimicrobial agents in the treatment or prevention of such infections. Our data derived from a murine model of *C. perfringens* gas gangrene suggest that mortalities may be higher with some combinations (metronidazole plus penicillin) than with monotherapy (metronidazole). Clearly, additional studies are needed to compare single and combination antimicrobial therapy in a similar model of gas gangrene using other strains and species of *Clostridium*.

ACKNOWLEDGMENTS

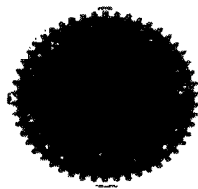
This work was supported in part by the Veterans Administration and by a grant-in-aid from The Upjohn Company.

We gratefully acknowledge Sally Sellers for secretarial assistance and Richard Olson for the statistical evaluations.

LITERATURE CITED

- Altieri, W. A., and W. D. Follen. 1971. Prevention and treatment of gas gangrene. *J. Am. Med. Assoc.* 217:806-813.
- Altieri, W. A., and W. L. Furste. 1947. Gas gangrene. *Int. Abstr. Surg.* 84:507-523.
- Altieri, W. A., J. A. McMurrin, and L. P. Alt. 1950. Chloromycetin and aureomycin in experimental gas gangrene. *Surgery* 28:621-631.
- Barry, A. L., and R. A. Lasser. 1979. In-vitro methods for determining minimal lethal concentrations of antimicrobial agents. *Am. J. Clin. Pathol.* 71:88-92.
- Brown, P. W., and P. B. Khaman. 1974. Gas gangrene in a metropolitan community. *J. Bone Jt. Surg. Am. Vol.* 56A:1445-1451.
- Bollen, J. J. 1970. Role of toxins in host-parasite relationships, p. 233-275. In T. C. Montie, S. Kadis, and S. J. Aji (ed.), *Microbial toxins*, vol. 2. Academic Press, Inc. (London), Ltd., London.
- Darke, S. G., A. M. King, and W. K. Slack. 1977. Gas gangrene and related infection: classification, clinical features and aetiology, management and mortality. A report of 88 cases. *Br. J. Surg.* 64:104-112.
- Demello, F. J., J. J. Haglin, and C. R. Hiechenek. 1973. Comparative study of experimental *Clostridium perfringens* infection in dogs treated with antibiotics, surgery and hyperbaric oxygen. *Surgery* 73:936-941.
- Dubreuil, L., J. Devos, C. Nent, and C. Romond. 1984. Susceptibility of anaerobic bacteria from several French hospitals to three major antibiotics. *Antimicrob. Agents Chemother.* 25:764-766.
- Flanagan, S. M., W. L. George, and M. E. Mulligan. 1985. Anaerobic infections. Part II. Disease-a-Month 31(11):48-57.
- Hae, L. R. 1944. Experimental *Clostridium welchii* infection. Penicillin therapy. *J. Infect. Dis.* 74:164-172.
- Irvine, T. T., E. R. S. Mele, and G. Smith. 1968. Treatment of *Clostridium welchii* infection with hyperbaric oxygen. *Surg. Gynecol. Obstet.* 127:1058-1066.
- Jayco, L. G., and H. C. Lichstein. 1959. Nutritional factors concerned with growth and lecithinase production by *Clostridium perfringens*. *J. Infect. Dis.* 104:142-151.
- Jeffrey, J. C., and S. Thomson. 1944. Gas gangrene in Italy: a study of 33 cases treated with penicillin. *Br. J. Surg.* 32:159-167.
- Joiner, K. A., A. B. Onderdonk, J. A. Gelman, J. G. Bartlett, and S. L. Gorbach. 1980. A quantitative model for subcutaneous abscess formation in mice. *Br. J. Exp. Pathol.* 61:97-107.
- Marrie, T. J., E. V. Haldane, C. A. Swanson, and E. A. Kerr. 1981. Susceptibility of anaerobic bacteria to nine antimicrobial agents and demonstration of decreased susceptibility of *Clostridium perfringens* to penicillin. *Antimicrob. Agents Chemother.* 19:51-55.
- Mohr, J. A., W. Griffiths, R. Helm, C. Garcia-Moral, and D. J. Flournoy. 1978. Clostridial myonecrosis (gas gangrene) during cephalosporin prophylaxis. *J. Am. Med. Assoc.* 239:847-849.
- Molloy, R., T. Helmer, C. E. Nord, and T. Wadstrom. 1976. Production of phospholipase and lethal toxins by *Clostridium*

- perfringens* types A to D. J. Gen. Microbiol. 94:136-144.
19. Morita, R., A. Yamamoto, S. Seda, and A. No. 1965. Nutritional requirements of *Clostridium perfringens* PB5K for alpha toxin production. Jpn. J. Med. Sci. Biol. 18:219-222.
 20. Nord, C. E., R. Mulhly, C. Smith, and J. T. Wadstrom. 1974. Formation of phospholipase C and theta hemolysin in pre-reduced media in batch and continuous culture of *Clostridium perfringens* type A. J. Gen. Microbiol. 84:117-127.
 21. Owen-Smith, M. S., and J. M. Matheson. 1968. Successful prophylaxis of gas gangrene of the high-velocity missile wound in sheep. Br. J. Surg. 55:36-39.
 22. Patterson, T. C., C. Kenting, and H. W. Clegg. 1944. Experiences in the prophylaxis and treatment of clostridial infections in casualties from the invasion of Europe. Br. J. Surg. 33:74-79.
 23. Pearson, R. D., R. T. Seelbinder, H. T. Davis, and S. W. Chapman. 1980. Method for reliable determination of minimal lethal antibiotic concentrations. Antimicrob. Agents Chemother. 18:699-708.
 24. Schwartzman, J. D., L. B. Fuller, and W.-L. L. Wang. 1977. Susceptibility of *Clostridium perfringens* isolated from human infections to twenty antibiotics. Antimicrob. Agents Chemother. 11:695-697.
 25. Smith, L. D. S. 1975. *Clostridium perfringens*, p. 115-176. In L. D. S. Smith (ed.), The pathogenic anaerobic bacteria. Charles C Thomas, Publisher, Springfield, Ill.
 - 25a. Stevens, D. L., K. A. Meier, B. M. Laine, and J. E. Mittam. 1987. Comparison of clindamycin and rifampin, tetracycline, metronidazole and penicillin for efficacy in prevention of experimental gas gangrene due to *Clostridium perfringens*. J. Infect. Dis. 155:220-228.
 26. Sutter, V. L., and S. M. Finegold. 1976. Susceptibility of anaerobic bacteria to 23 antimicrobial agents. Antimicrob. Agents Chemother. 10:736-752.
 27. Traub, W. H. 1986. *Clostridium perfringens* type A: comparison of *in vitro* and *in vivo* activity of twelve antimicrobial drugs. Chemotherapy (Basel) 32:59-67.



Choctaw Health Center

Patricia D. Dunlap M.D.
Emergency Department Director
210 Hospital Circle
Choctaw, MS 39350
Telephone: 601-389-4456 or 601-389-4409
Fax: 601-389-4401

Via Fed Ex and email

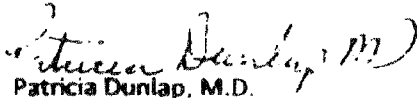
November 28, 2023

Dear Dr. Henderson,

While covering several of your shifts during your absence, I was made aware of disruptive behavior you have inflicted upon the nursing staff. Condescending and bullying behavior is not tolerated in the workplace, nor is ignoring information and disrespecting the knowledge and experience of your colleagues. I am disappointed to learn that this behavior has been ongoing. Let me remind you as well that the hospital's policies require reporting of disruptive behavior, as does the Tribe's Administrative Personnel Procedures & Policy.

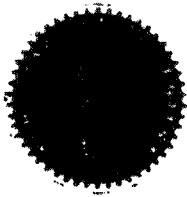
The nursing staff, as well as any other provider, have a duty to report concerns or problems involving the standard of care. I was informed that you have been observed ordering Rocephin regularly, especially for children, and that you order tests at the same time as you order Rocephin, without waiting for test results. I audited our provider records and found that there is merit to the concerns brought to my attention. I am especially concerned that you ordered Rocephin for a 9-day-old infant, which the records showed the parents refused. I am further concerned that you ordered Rocephin for a 19-day-old infant which was administered to the infant. In an infant of this age (less than 30-days-old) if Rocephin is deemed necessary then a septic workup should be performed. These actions fall well below the standard of care required of a physician.

Dr. Willis has been advised of these matters and this information has been submitted to our Compliance Administrator for investigation. While these matters are under investigation, you are summarily suspended per the Medical Staff bylaws, and you will not be placed on the schedule until further notice. You will be notified as to the results of the investigation. If you have any questions, you may contact me, Dr. Willis, or HR @ 601-389-4250.


Patricia Dunlap, M.D.

CC: Dr. Walt Willis, CMO
Linda McMillan, HR Director
Kristen Blair, Compliance Administrator
Mary Harrison, Interim Health Director
Tanya Phillips, General Counsel

EXHIBIT "D"



Choctaw Health Center
Medical Staff
Medical Executive Committee
Choctaw Health Center
Mississippi Band of Choctaw Indians
P.O. Box 1000000, Jackson, MS 39210

December 1, 2023

Dr. James L. Henderson
1505 Springridge Dr.
Jackson, MS 39211

Dr. Henderson,

The Choctaw Health Center Medical Executive Committee met on November 30th, 2023. The focus of this meeting was a review of the concerns outlined by the letter that you received from Dr. Dunlap dated November 28th, 2023. The CHC Medical Executive Committee took action to uphold the suspension of your medical privileges at Choctaw Health Center. This committee also recommended expulsion from the Choctaw Health Center Medical Staff effective immediately on November 30th, 2023.

Pursuant to the CHC Medical Staff Bylaws, you have the right to request a meeting with the Medical Executive Committee. This meeting will occur within ten days of your request. You may request this meeting by contacting me through my e-mail address. My e-mail address is as follows: walt.willis@choctaw.org.

Respectfully,


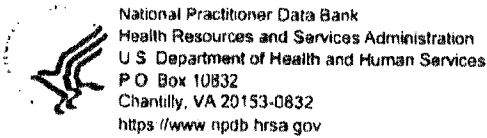

Walt Willis MD CMO

EXHIBIT "E"

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DCN: 5500000223523324
Process Date 12/19/2023
Page 1 of 3
HENDERSON, JAMES LESLIE
For authorized use by:
HENDERSON, JAMES LESLIE

HENDERSON, JAMES LESLIE**CHOCTAW HEALTH CENTER****TITLE IV CLINICAL PRIVILEGES ACTION****Date of Action: 11/30/2023****Initial Action****Basis for Initial Action**

- REVOCATION OF CLINICAL PRIVILEGES

- SUBSTANDARD CARE OR INADEQUATE SKILL LEVEL
- DISRUPTIVE CONDUCT**A. REPORTING
ENTITY**

Entity Name: CHOCTAW HEALTH CENTER
Address: 210 HOSPITAL CIR
City, State, Zip: CHOCTAW, MS 39350-6781
Country:
Name or Office: JENNIFER COOK
Title or Department: CREDENTIALING COORDINATOR
Telephone: (601) 389-4463
Entity Internal Report Reference:
Type of Report: INITIAL

**B. SUBJECT
IDENTIFICATION
INFORMATION
(INDIVIDUAL)**

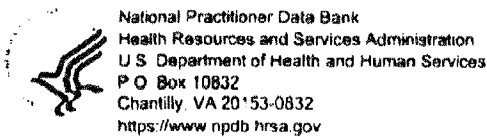
Subject Name: HENDERSON, JAMES LESLIE
Other Name(s) Used:
Gender: MALE
Date of Birth: 02/18/1960
Organization Name:
Work Address:
City, State, ZIP:
Home Address: 1505 SPRINGBRIDGE DR
City, State, ZIP: JACKSON, MS 39211-3231
Deceased: NO
Social Security Numbers (SSN): ***-**-3191
National Provider Identifiers (NPI): 1583575597
Professional School(s) & Year(s) of Graduation: UNIVERSIDAD AUTONOMA DE GUADALAJARA (1985)
Occupation/Field of Licensure: PHYSICIAN (MD)
State License Number, State of Licensure: 15743, MS
Specialty: PLASTIC SURGERY
Drug Enforcement Administration (DEA) Numbers: BH5772834
Name(s) of Health Care Entity (Entities) With Which Subject Is
Affiliated or Associated (Inclusion Does Not Imply Complicity in
the Reported Action): CHOCTAW HEALTH CENTER
Business Address of Affiliate: 210 HOSPITAL CIR
City, State, ZIP: CHOCTAW, MS 39350-6781
Nature of Relationship(s): SUBJECT IS EMPLOYEE OF AFFILIATE OR ASSOCIATE
(200)

C. INFORMATION

Type of Adverse Action: TITLE IV CLINICAL PRIVILEGES
Basis for Action: SUBSTANDARD CARE OR INADEQUATE SKILL LEVEL (F6)
DISRUPTIVE CONDUCT (D5)
Adverse Action
Classification Code(s): REVOCATION OF CLINICAL PRIVILEGES (1610)
Date Action Was Taken: 11/30/2023
Date Action Became Effective: 11/30/2023

EXHIBIT "F"**CONFIDENTIAL DOCUMENT - FOR AUTHORIZED USE ONLY**

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Process Date: 12/18/2023
Page: 2 of 3
HENDERSON, JAMES LESLIE
For authorized use by
HENDERSON, JAMES LESLIE

Length of Action: PERMANENT

Description of Subject's Act(s) or Omission(s) or Other
Reasons for Action(s) Taken and Description of Action(s) Taken
by Reporting Entity:

Choctaw Health Center Medical Executive Committee voted to revoke Dr. James L. Henderson's clinical privileges and to expel him from the Medical Staff per Medical Staff Bylaws. Dr. Henderson prescribed IM antibiotics to neonates presenting to the Emergency Department and failed to perform septic workups and he discharged these patients home. Upon peer review, it was determined that a pattern of prescribing IM antibiotics to neonates fell below the standard of care. Dr. Henderson's supervisor also investigated disruptive behavior towards the ED nursing staff and nurse practitioners and validated those complaints.

D. SUBJECT STATEMENT

If the subject identified in Section B of this report has submitted a statement, it appears in this section.

Date Submitted: 04/24/2024

At the time of this complaint I, Dr. Henderson, was on medical leave and was still being paid by Choctaw Health Center. I was not terminated until January 12, 2024, and this was not in accordance Choctaw Health Center Bylaws. On review of the 2 infants' medical records: Patient #1 (19 day old) was correctly treated with Rocephin after failing symptomatic treatment without antibiotics from the clinic. Supervisor did not dispute the correct use of antibiotics. The child clinically did not have sepsis, vital signs were normal. Infant did well and the standard of care was maintained. Patient #2 (9 day old) correctly did not receive antibiotics for a upper eyelid irritation. Infant did well and the standard of care was maintained. Choctaw HR has provided me a complete copy of my HR- Personnel file and I have my supervisor's evaluations, which she has provided. There is no verbal or written record of any disruptive behavior or mistreatment of nursing staff by myself (Dr. Henderson) at the Choctaw Health Center. The validity of the information provided to this databank by Choctaw Health Center has come under scrutiny and found to be erroneous.

E. REPORT STATUS

Unless a box below is checked, the subject of this report identified in Section B has not contested this report.

- ☒ This report has been disputed by the subject identified in Section B.
- ☐ At the request of the subject identified in Section B, this report is being reviewed by the Secretary of the U.S. Department of Health and Human Services to determine its accuracy and/or whether it complies with reporting requirements. No decision has been reached.
- ☐ At the request of the subject identified in Section B, this report was reviewed by the Secretary of the U.S. Department of Health and Human Services and a decision was reached. The subject has requested that the Secretary reconsider the original decision.
- ☐ At the request of the subject identified in Section B, this report was reviewed by the Secretary of the U.S. Department of Health and Human Services. The Secretary's decision is shown below:

Date of Original Submission: 12/18/2023

Date of Most Recent Change: 12/18/2023

CONFIDENTIAL DOCUMENT - FOR AUTHORIZED USE ONLY

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National Practitioner Data Bank
Health Resources and Services Administration
U.S. Department of Health and Human Services
P.O. Box 10832
Chantilly, VA 20153-0832
<https://www.npdb.hrsa.gov>

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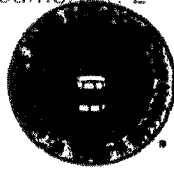
This report is maintained under the provisions of: Title IV

The information contained in this report is maintained by the National Practitioner Data Bank for restricted use under the provisions of Title IV of Public Law 99-660, as amended, and 45 CFR Part 60. All information is confidential and may be used only for the purpose for which it was disclosed. Disclosure or use of confidential information for other purposes is a violation of federal law. For additional information or clarification, contact the reporting entity identified in Section A.

END OF REPORT

CONFIDENTIAL DOCUMENT - FOR AUTHORIZED USE ONLY

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OFFICE OF THE TRIBAL CHIEF CYRUS BEN
101 Industrial Road • P.O. Box 6010 • Choctaw, Mississippi 39350
Phone: (601) 656-5251 • Fax: (601) 650-1606

VIA HAND-DELIVERY

January 11, 2024

Dr. James Henderson
1505 Springridge Drive
Jackson, MS 39211

**Re: Termination From Mississippi Band of
Choctaw Indians' Choctaw Health Department**

Dear Dr. Henderson:

I am writing to advise you that you are being terminated January 12, 2024, from employment in your position as Staff Physician – ER with the Medical Program, Choctaw Health Department due to Unsatisfactory Work Performance, Failure to Work to Communicate or Work Effectively with others, Negative Attitude, and medical treatment not meeting the standard of care.

On November 30, 2023, Choctaw Health Center's Medical Executive Committee voted unanimously to uphold the summary suspension authorized under CHC's Medical Staff Bylaws. The decision to suspend your privileges was reviewed by the governing board and they upheld the revocation of your privileges. The recommendation for termination is based on internal findings that you were disruptive in the workplace, and your performance was unsatisfactory for treatment which fell below the standard of care.

Pursuant to the Revised Administrative Personnel Policy and Procedures, Section XVI (C)(3)(a) and Section XVII (D), your employment is terminated.

EXHIBIT "G"

"Choctaw Self-Determination"

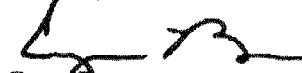
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Letter to J. Henderson, M.D.
Page 2

Your health care coverage that the Tribe provides will remain in effect until February 1, 2024. At that time, you can choose to continue health care coverage at your cost by contacting Tracey Shoemaker at Risk Management at (601)663-7503. Your last paycheck will be provided to you after February 08, 2024 since you are paid bi-weekly.

Should you have any questions regarding this matter, please contact Dianne Willis, Director in the Human Resources department at (601)650-1548.

Sincerely,



Cyrus Ben
Tribal Chief

Enclosure

c: Dianne Willis, Director, Human Resources
W. Diane Mawell, Attorney General
Karen Adams, CFO
Krisan Williams, Payroll
Mary Harrison, Interim Health Director/CHC
Linda McMillan, HR Director/CHC
Employee File

ACKNOWLEDGEMENT OF RECEIPT

James Henderson, M.D.

Date

Contact Number

WITNESS:

Signature of Witness

Date

"Choctaw Self-Determination"